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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,655	09/18/2001	John R. Williams	DR-326J	7504

7590

09/29/2003

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EXAMINER

CYGAN, MICHAEL T

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/954,655

Applicant(s)

WILLIAMS ET AL.

Examiner

Michael Cygan

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because a sheet of the drawings (containing Figures 3A-3C and 4) is missing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. The informal (handdrawn) version of the sheet is present in the application file.
2. The drawings are objected to because in Figure 5, the wire labeled 99 should be labeled 97. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because in Figure 8, the numeral 107 should refer to pads which are not shown in the Figure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piletsky (Macromolecules March 1998) in view of McGeehin (EP 609,316 B1). Piletsky teaches the method of forming a resistive sensor comprising nonimprinted membrane films and a semiconductor polymer sensor comprising imprinted membrane films, both of which produce changes in resistance from swelling when exposed to analyte and/or interferents. The changes in resistance for both sensors are measured and compared. The polymer used is an ethylene glycol, which contains carbon molecules in the polymer backbone. See page 2138 last two paragraphs and page 2139. Piletsky teaches the claimed apparatus and method except for the use of a circuit which subtracts the respective changes in resistance of one sensor from another.

McGeehin teaches the use of a circuit which takes the difference (subtraction) of two sensors in the measurement of a component among interferences; see page 5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a circuit as taught by McGeehin in the invention of Piletsky to subtract the change in resistance of the molecular imprinted resistive sensor from the change in resistance of the resistive sensor to determine the presence and concentration of the desired analyte, since McGeehin states on page 5 lines 50-54 that this circuit can be used to "enhance the signal due to the gas constituent to be measured, and to depress that for interfering gas constituents."

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piletsky (Macromolecules March 1998) in view of McGeehin (EP 609,316 B1) as applied to claim 1 above, and further in view of Ambos (US 5,007,283). Piletsky in view of McGeehin teaches the claimed invention except for the use of an A/D converter interfaced with a computer having software which reads resistance values. Ambos teaches a resistive sensor system having an A/D converter interfaced with a computer having software which reads resistance values. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an A/D converter interfaced with a computer having software which

reads resistance values as taught by Ambos in the invention taught by Piletsky to calculate, store, and display sensor results, since the advantages of computers for data manipulation are well known and include ease of data computing, storage, transferability, and display.

***Allowable Subject Matter***

6. Claims 5, 6, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: the claims recite the use of copper in the resistive sensors, which when taken in combination with the other claimed limitations, is neither disclosed nor fairly taught in the prior art.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Resistive molecular imprinted polymer sensors are disclosed by Merrill (US 6,232,783 B1), Vossmeier (US 6,458,327 B1), Huang (US 2002/0045275 A1), and Tepper (US 2002/0102312 A1).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is 703-305-0846. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'Michael Cygan', with a stylized, cursive flourish at the end.

Michael Cygan  
Examiner  
Art Unit 2855